

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	§	
TODD ET AL.	§	Group Art Unit: 1796
	§	
Serial No.: 10/664,126	§	
	§	
Filed: SEPT. 17, 2003	§	Examiner: FIGUEROA, JOHN J.
	§	
Title: "IMPROVED SUBTERRANEAN	§	
TREATMENT FLUIDS AND METHODS	§	
OF TREATING SUBTERRANEAN	§	Atty. Docket No: 2003-IP-010228U1
FORMATIONS"	§	
	§	
	§	

CERTIFICATE OF FILING ELECTRONICALLY VIA EFS
37 C.F.R. § 1.8

I HEREBY CERTIFY THAT I HAVE A REASONABLE BASIS FOR BELIEF THAT THIS CORRESPONDENCE IS BEING SUBMITTED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE VIA EFS (ELECTRONICALLY) ON THE DATE INDICATED BELOW, AND IS ADDRESSED TO:

HONORABLE COMMISSIONER FOR PATENTS
P.O. Box 1450
ALEXANDRIA, VA 22313-1450


DEBBIE ALLEN

DATE OF SUBMISSION: JULY 11, 2008
ELECTRONIC FILING (EFS)

MAIL STOP AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

The following Pre-Appeal Brief Request for Review ("Request") is being filed in accordance with the provisions set forth in the Official Gazette Notice of July 12, 2005 ("OG Notice"). Pursuant to the OG Notice, this Request is being filed concurrently with a Notice of Appeal and the applicable fee. Applicants respectfully request reconsideration of the application in light of the remarks set forth below.

REMARKS

In a Final Office Action dated March 18, 2008 ("Final Office Action"), the Examiner improperly rejected claims 15-18, 20-23, 29, 30, 47-50, 56-64, 66, and 67 under 35 U.S.C. § 102(b) as unpatentable over U.S. Patent No. 6,387,986 to Moradi-Araghi *et al.* ("Moradi-Araghi"), and improperly rejected claims 15, 23, 28, 47, 50, 55, and 65 under 35

U.S.C. § 103(a) as unpatentable over *Moradi-Araghi* in view of U.S. Patent No. 5,728,652 to Dobson *et al.* (“*Dobson*”), U.S. Patent No. 5,191,931 to Himes *et al.* (“*Himes*”), or U.S. Patent No. 4,531,594 to Cowan (“*Cowan*”). All of these rejections contain clear legal and factual deficiencies.

In order to form a basis for a § 102(b) rejection, a prior art reference must disclose each and every element as set forth in the claim. See MANUAL OF PATENT EXAMINING PROCEDURE (hereinafter “MPEP”) § 2131 (2007). However, *Moradi-Araghi* does not disclose the use of a bridging agent that is a degradable material, as recited in claims 15 and 47, nor does it disclose forming a self-degrading filter cake that comprises the bridging agent and allowing that filter cake to degrade, as recited in claim 15. Moreover, *Moradi-Araghi* does not disclose a bridging agent in an amount sufficient to form an efficient filter cake, as required in claims 29 and 30. Thus, *Moradi-Araghi* cannot anticipate the rejected claims.

In order to form a basis for a § 103(a) rejection, there must be some teaching, suggestion, or other rationale for why a person of skill in the art would modify or combine the prior art teachings to arrive at the claimed invention. MPEP at § 2143. The Examiner has provided no such rationale for modifying *Moradi-Araghi* to include the missing elements recited above, or to include a degradable material bridging agent having a particle size distribution of 0.1 micron to 1.0 millimeter, as recited in claims 28 and 55. Thus, the combination of *Moradi-Araghi* with *Dobson*, *Himes*, or *Cowan* cannot obviate the rejected claims.

1. ***Moradi-Araghi* Does Not Disclose a Degradable Material Bridging Agent or the Formation of a Filter Cake, and Thus Cannot Anticipate Claims 15-18, 20-23, 29, 30, 47-50, 56-64, 66, and 67.**

Moradi-Araghi contains no discussion whatsoever of a degradable material acting as a bridging agent, which the Examiner does not dispute. Rather, *Moradi-Araghi* discloses crosslinkers encapsulated with a (poly)orthoester coating (see *Moradi-Araghi* at Abstract & col. 3, ll. 7-17), which the Examiner believes to anticipate a degradable material bridging agent. In rejecting Applicants’ claims, the Examiner assumes that because “dependent claims 22 and 49 define the degradable material (and, thus, the bridging agent) to be, *inter alia*, (poly)orthoester,” those materials in any form will “inherently” act as a bridging agent and form a self-degrading filter cake when placed downhole. (Office Action dated August 8, 2007 (“the August 8, 2007 Office Action”) at 3). In the Final Office Action, the Examiner maintains this assumption by arguing that “[i]t is unclear from Applicant’s arguments ... as to why *Moradi-Araghi*’s

composition for oil field applications containing (poly)orthoester ... would not function in the same manner when provided into an oil well/borehole.” (Final Office Action at 5). There is no support for this assumption. The mere fact that the bridging agent of Applicants’ claims may comprise (poly)orthoesters does not indicate that the (poly)orthoester-encapsulated crosslinkers of *Moradi-Araghi* are bridging agents.

As Applicants have explained in their previous responses, the encapsulated crosslinkers disclosed in *Moradi-Araghi* are not properly sized to act as bridging agents or to form a self-degrading filter cake within the formation. Applicants incorporate by reference the remarks in their response to the August 8, 2007 Office Action (response filed on November 8, 2007) on this point. To reiterate, it is well known and documented in the art that particles chosen without reference to the particle size needed to bridge pore throats within a subterranean formation will fail to act as a bridging agent, and will fail to form a filter cake. Applicants have cited numerous references (discussion and courtesy copies of these references were provided with Applicants’ November 8, 2007 response) showing that larger particles of degradable materials, like those in *Moradi-Araghi*, simply sit on top of the pore throats in a subterranean formation, creating new pore spaces between the formation particulates and the degradable particles. Fluid will flow through these new pore throats readily, and no filter cake will form. Thus, the larger encapsulated crosslinkers in *Moradi-Araghi* are not bridging agents, nor will they form a self-degrading filter cake.

The Final Office Action ignores these arguments and maintains that particle size is not relevant to “the rejected claims” since those claims do not recite specific particle sizes. However, all of the rejected claims do require the use of a degradable material bridging agent, as recited in claims 15 and 47 (the parent claims of all claims in the application), and claim 15 further requires forming a self-degrading filter cake that comprises that bridging agent. As Applicants have shown, because the encapsulated crosslinkers of *Moradi-Araghi* are not properly sized, they are not bridging agents and will not perform these steps. Thus, *Moradi-Araghi* cannot anticipate any of claims 15-18, 20-23, 29, 30, 47-50, 56-64, 66, and 67.

2. **Moradi-Araghi Does Not Disclose a Degradable Material Bridging Agent in an Amount Sufficient to Form an Efficient Filter Cake, and Thus Cannot Anticipate Claims 29 and 30.**

Similarly, Applicants have argued that *Moradi-Araghi* cannot anticipate claims 29 and 30, in addition to the reasons discussed above with respect to claim 15 from which claims 29

and 30 depend, because *Moradi-Araghi* does not disclose including an amount of a bridging agent sufficient to form an “efficient filter cake.” The Examiner has dismissed this argument on the grounds that an “efficient filter cake” is not explicitly recited in the claims. (See Final Office Action at 6). This is clearly incorrect, as this element is plainly found in claim 29, from which claim 30 depends. The Examiner’s alternative argument that the amount of the encapsulated crosslinkers disclosed in *Moradi-Araghi* falls within a “suitable range for the degradable polymer” simply does not establish that those encapsulated crosslinkers are capable of forming an efficient filter cake. Indeed, the Examiner has admitted on the record that larger particles like those in *Moradi-Araghi* may not bridge pore throats “optimally” (August 8, 2007 Office Action at 4), and as discussed above, such particles will not form any filter cake at all, much less an “efficient filter cake” within Applicants’ definition. Applicants incorporate by reference the remarks in their response of November 8, 2007 on this point. Since the Examiner has failed to consider the patentability of claims 29 and 30 separately, at least the rejections of these claims should be withdrawn.

3. **There is No Reason to Modify *Moradi-Araghi* to Include a Degradable Material Bridging Agent that Can Form a Filter Cake, and Thus *Moradi-Araghi* Cannot Obviate Claims 15, 23, 28, 47, 50, 55, and 65.**

As discussed in Section 1 above, *Moradi-Araghi* does not teach the use of a bridging agent that is a degradable material, as recited in claims 15 and 47, nor does it teach forming a self-degrading filter cake that comprises the bridging agent and allowing that filter cake to degrade, as recited in claim 15. Nor does *Dobson*, *Himes*, or *Cowan* teach these elements. With respect to claims 28 and 55, the Examiner concedes that *Moradi-Araghi* does not teach any particle size distribution in the range recited in those claims. (August 8, 2007 Office Action at 5).

The Final Office Action simply asserts that these elements would be obvious modifications of *Moradi-Araghi* on the grounds that *Dobson*, *Himes*, and *Cowan* teach that “it is routine to alter the particle size of fluid composition additives to provide enhanced fluid loss prevention.” (Final Office Action at 7). This conclusory statement grossly mischaracterizes the teachings of those references. *Dobson*, *Himes*, and *Cowan* specifically deal with optimal sizes of bridging agent particulates to block pore throats in a formation, whereas the encapsulated crosslinkers of *Moradi-Araghi* are used for the entirely unrelated purpose of gelling a fluid. These additives are only related (if at all) in that they are both used in subterranean treatments.

This in no way suggests that a person of skill in the art would apply specifications for the size of bridging agent particulates to improve an encapsulated crosslinker. *Compare* MPEP at § 2143 (use of a known technique to improve similar devices or products in the same way may be obvious). Nor does the Examiner provide any explanation for why it would be effective or useful to modify the particle sizes of encapsulated crosslinkers, which have no ascertainable use as bridging agents or on fluid loss prevention in general, much less to modify them according to the teachings of *Dobson*, *Himes*, and *Cowan* that speak to bridging agents. Applicants incorporate by reference the remarks in their response of November 8, 2007 on this point. Thus, it would not be obvious to modify *Moradi-Araghi* to include a bridging agent that is a degradable material, the steps of forming a self-degrading filter cake that comprises the bridging agent and allowing that filter cake to degrade, or a degradable material bridging agent having a particle size distribution in the range recited in claims 28 and 55. Thus the rejections of claims 15, 23, 28, 47, 50, 55, and 65 under § 103(a) should be withdrawn.

CONCLUSION

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same.

Applicants believe that there are no fees due in association with this filing of this Request. However, should the Commissioner deem that any additional fees are due, including any fees for extensions of time, the Commissioner is authorized to debit Baker Botts L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.0187, for any underpayment of fees that may be due in association with this filing.

Respectfully submitted,



Elizabeth L. Durham
Registration No. 59,509
BAKER BOTTS L.L.P.
One Shell Plaza
910 Louisiana
Houston, TX 77002
Telephone: 713.229.2104
Facsimile: 713.229.7704
Email: liz.durham@bakerbotts.com

Date: July 11, 2008